

IN THE CLAIMS:

Please amend claims 1-17, 19-22, and 24-31 as follows. Please add new claims 32-34 as follows.

1. (Currently Amended) A method of allocating resources in a wireless telecommunications system, wherein wireless signals are transmitted over a signal space, the method ~~including~~ comprising:

generating a sampled receive signal from a ~~receive~~ wirelessly received signal;

deriving an interference level threshold on the basis of an iterative statistical analysis of the sampled receive signal;

identifying an interfered portion of the signal space on the basis of a comparison of the sampled receive signal and the interference level threshold; and

reducing transmit resources from the interfered portion of the signal space.

2. (Currently Amended) The method of claim 1, wherein the ~~step of~~ deriving the interference level threshold includes at least one iteration ~~step~~ comprising:

calculating the mean of the sampled receive signal;

generating the interference level threshold by using the mean, and a predefined reliability factor characterizing statistics of a non-interfered portion in the sampled receive signal; and

neglecting a portion of the sampled receive signal, the portion lying above the interference level threshold.

3. (Currently Amended) The method of claim 1, further ~~including~~ comprising:
reducing receive resources from the interfered portion of the signal space.

4. (Currently Amended) The method of claim 1, wherein the ~~step of~~ reducing the
transmit resources includes at least one element from the group comprising:

attenuating a portion of transmit signal, the portion being located in the interfered
portion of the signal space; and

excising a portion of the transmit signal, the portion being located in the interfered
portion of the signal space.

5. (Currently Amended) The method of claim 1, further ~~including~~ comprising:

transmitting information on the interfered portion of the signal space; ~~and~~

receiving the information; and

reducing the transmit resources from the interfered portion of the signal space on
the basis of the information.

6. (Currently Amended) The method of claim 1, further ~~including~~ comprising:

transmitting information on the interfered portion of the signal space; ~~[[and]]~~

receiving the information; and

reducing the receive resources from the interfered portion of the signal space on
the basis of the information.

7. (Currently Amended) The method of claim 1, further ~~including~~comprising:
allocating transmit resources to a non-interfered portion of the signal space.

8. (Currently Amended) The method of claim 1, wherein the signal space includes
at least one dimension selected from the group comprising:

a spatial dimension; a temporal dimension; a frequency dimension; and a
fractional frequency dimension.

9. (Currently Amended) A transceiver of a wireless telecommunications system,
wherein wireless signals are transmitted over a signal space, the transceiver
~~including~~comprising:

a sampling unit ~~for generating~~ configured to generate a sampled receive signal
from a ~~receive~~ wirelessly received signal;

a deriving unit ~~for deriving~~ configured to derive an interference level threshold on
the basis of an iterative statistical analysis of the sampled receive signal;

an identifying unit ~~for identifying~~ configured to identify an interfered portion of
the signal space on the basis of a comparison of the sampled receive signal and the
interference level threshold; and

a transmitting unit ~~for transmitting~~ configured to transmit information on the
interfered portion of the signal space to a second transceiver.

10. (Currently Amended) The transceiver of claim 9, wherein the deriving unit ~~comprises~~ is configured to perform an iterative procedure including tasks of:

a calculating unit configured to calculate the mean of the sampled receive signal;

a generating unit configured to generate the interference level threshold by using the mean, and a predefined reliability factor characterizing statistics of a non-interfered portion in the sampled receive signal; and

a neglecting unit configured to neglect a portion of the sampled receive signal, the portion lying above the interference level threshold.

11. (Currently Amended) The transceiver of claim 9, ~~further including~~ comprising:

a receive resource allocation unit connected to the identifying unit, ~~for reducing~~ configured to reduce receive resources from the interfered portion of the signal space.

12. (Currently Amended) The transceiver of claim 9, wherein the signal space includes at least one dimension selected from the group comprising:

a spatial dimension; a temporal dimension; a frequency dimension; and a fractional frequency dimension.

13. (Currently Amended) A transceiver of a wireless telecommunications system, wherein wireless signals are transmitted over a signal space, the transceiver ~~including~~ comprising:

a sampling unit ~~for generating~~ configured to generate a sampled receive signal from a ~~receive wirelessly received~~ signal;

a deriving unit ~~for deriving~~ configured to derive an interference level threshold on the basis of an iterative statistical analysis of the sampled receive signal;

an identifying unit ~~for identifying~~ configured to identify an interfered portion of the signal space on the basis of a comparison of the sampled receive signal and the interference level threshold; and

a transmit resource allocation unit ~~for reducing~~ configured to reduce transmit resources from the interfered portion of the signal space.

14. (Currently Amended) The transceiver of claim ~~[[15]]~~ 13, wherein the deriving unit ~~comprises is configured to perform an iterative procedure including tasks of:~~

a calculating unit configured to calculate the mean of the sampled receive signal;

a generating unit configured to generate the interference level threshold by using the mean, and a predefined reliability factor characterizing statistics of a non-interfered portion in the sampled receive signal; and

a neglecting unit configured to neglect a portion of the sampled receive signal, the portion lying above the interference level threshold.

15. (Currently Amended) The transceiver of claim 13, further ~~including~~ comprising:

a receive resource allocation unit connected to the identifying unit, ~~for reducing~~
configured to reduce receive resources from the interfered portion of the signal space.

16. (Currently Amended) The transceiver of claim 13, wherein the transmit resource allocation unit is configured to perform at least one of the tasks selected from a group ~~including~~comprising:

attenuating a portion of a transmit signal, the portion being located in the interfered portion of the signal space; and excising a portion of a transmit signal, the portion being located in the interfered portion of the signal space. .

17. (Currently Amended) The transceiver of claim 13, further ~~including~~comprising:

a transmitting unit for transmitting information on the interfered portion of the signal space to a second transceiver.

18. (Original) The transceiver of claim 13, wherein the transmit resource allocation unit is configured to allocate transmit resources to a non-interfered portion of the signal space.

19. (Currently Amended) The transceiver of claim 13, wherein the signal space includes at least one dimension selected from the group comprising:

a spatial dimension; a temporal dimension; a frequency dimension; and a fractional frequency dimension.

20. (Currently Amended) A transceiver of a wireless telecommunications system, wherein wireless signals are transmitted over a signal space, the transceiver ~~including~~comprising:

a receiving unit ~~for receiving~~ configured to receive information on an interfered portion of the signal space from a second transceiver; and

a transmit resource allocation unit ~~for reducing~~ configured to reduce transmit resources from the interfered portion of the signal space on the basis of the information.

21. (Currently Amended) The transceiver of claim 20, further ~~including~~comprising:

a receive resource allocation unit connected to the receiving unit, ~~for reducing~~ configured to reduce receive resources from the interfered portion of the signal space on the basis of the information.

22. (Currently Amended) The transceiver of claim 20, wherein the transmit resource allocation unit is configured to perform at least one task selected from a group comprising:

attenuating a portion of a transmit signal, the portion being located in the interfered portion of the signal space; and excising a portion of the transmit signal, the portion being located in the interfered portion of the signal space.

23. (Original) The transceiver of claim 20, wherein the transmit resource allocation unit is configured to allocate transmit resources to a non-interfered portion of the signal space.

24. (Currently Amended) The transceiver of claim 20, wherein the signal space includes at least one dimension selected from the group comprising:

a spatial dimension; a temporal dimension; a frequency dimension; and a fractional frequency dimension.

25. (Currently Amended) A wireless telecommunications system, wherein wireless signals are transmitted over a signal space, the wireless telecommunications system ~~including~~comprising:

a generating means for generating unit configured to generate a sampled receive signal from a ~~receive~~ wirelessly received signal;

a deriving means for deriving unit configured to derive an interference level threshold on the basis of an iterative statistical analysis of the sampled receive signal;

~~an identifying means for identifying~~ unit configured to identify an interfered portion of the signal space on the basis of a comparison of the sampled receive signal and the interference level threshold; and

~~a reducing means for reducing~~ unit configured to transmit resources from the interfered portion of the signal space.

26. (Currently Amended) The telecommunications system of claim 25, wherein the deriving ~~means include~~ unit comprises:

~~a calculating means for calculating~~ unit configured to calculate the mean of the sampled receive signal;

~~a generating means for generating~~ unit configured to generate the interference level threshold by using the mean, and a predefined reliability factor characterizing statistics of a non-interfered portion in the sampled receive signal; and

~~a neglecting means for neglecting~~ unit configured to neglect a portion of the sampled receive signal, the portion lying above the interference level threshold, in a succeeding iteration ~~step~~,

wherein the combination of the ~~calculating means~~ unit, ~~generating means~~ unit, and ~~neglecting means~~ unit acts in an iterative manner.

27. (Currently Amended) A computer program embodied on a computer readable medium executed by a processor ~~for executing a computer process~~ in a wireless

telecommunications system, wherein wireless signals are transmitted over a signal space, the computer program is configured to perform ~~process comprising the steps of:~~

receiving as input a sampled receive signal generated from a ~~receive~~ wirelessly received signal;

deriving an interference level threshold on the basis of an iterative statistical analysis of the sampled receive signal; [[and]]

identifying an interfered portion of the signal space on the basis of a comparison of the sampled receive signal and the interference level threshold; and

outputting information on the interfered portion of the signal space.

28. (Currently Amended) A computer program of claim 27, wherein the computer ~~process~~ program further includes iteratively performing ~~the iterative steps of:~~

calculating the mean of the sampled receive signal;

generating the interference level threshold by using the mean, and a predefined reliability factor characterizing statistics of a non-interfered portion in the sampled receive signal; and

neglecting a portion of the sampled receive signal, the portion lying above the interference level threshold, in a succeeding iteration ~~step~~.

29. (Currently Amended) A computer program of claim 27, wherein the computer ~~process~~ program further ~~includes~~ comprises ~~the step of~~

reducing transmit resources from the interfered portion of the signal space.

30. (Currently Amended) A computer program embodied on a computer readable medium executed by a processor ~~for executing a computer process~~ in a wireless telecommunications system, wherein wireless signals are transmitted over a signal space, the computer program is configured to perform ~~process comprising the steps of:~~

receiving as input information on an interfered portion of the signal space; and

reducing transmit resources from the interfered portion of the signal space on the basis of the information.

31. (Currently Amended) A computer program of claim 30, wherein the computer ~~process further includes the step of~~ program is further configured to perform:

allocating transmit resources to a non-interfered portion of the signal space.

32. (New) A transceiver of a wireless telecommunications system, wherein wireless signals are transmitted over a signal space, the transceiver comprising:

sampling means for generating a sampled receive signal from a wirelessly received signal;

deriving means for deriving an interference level threshold on the basis of an iterative statistical analysis of the sampled receive signal;

identifying means for identifying an interfered portion of the signal space on the basis of a comparison of the sampled receive signal and the interference level threshold;
and

transmitting means for transmitting information on the interfered portion of the signal space to a second transceiver.

33. (New) A transceiver of a wireless telecommunications system, wherein wireless signals are transmitted over a signal space, the transceiver comprising:

sampling means for generating a sampled receive signal from a wirelessly received signal;

deriving means for deriving an interference level threshold on the basis of an iterative statistical analysis of the sampled receive signal;

identifying means for identifying an interfered portion of the signal space on the basis of a comparison of the sampled receive signal and the interference level threshold;
and

transmit resource allocation means for reducing transmit resources from the interfered portion of the signal space.

34. (New) A transceiver of a wireless telecommunications system, wherein wireless signals are transmitted over a signal space, the transceiver comprising:

receiving means for receiving information on an interfered portion of the signal space from a second transceiver; and

transmit resource allocation means for reducing transmit resources from the interfered portion of the signal space on the basis of the information.